A NEW SUBFAMILY FOR THE FOSSIL CONOPID FLY, *PALAEOMYOPA TERTIARIA* (DIPTERA: CONOPIDAE)[1]

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ABSTRACT: The fossil fly *Palaeomyopa tertiaria* Meunier is placed in a new subfamily *Palaeomyopinae* of the family Conopidae.

Only one fossil conopid fly is definitely known. I agree with Hennig's (1966) conclusion that *Palaeomyopa tertiaria* Meunier (1889, 1912) and *Palaeosicus loewi* Meunier (1916) are synonymous. *Poliomyia recta* Scudder (1878) from shale from Green River, Wyoming is an incomplete specimen and may or may not be a conopid.

In attempting to place this fly into one of the current subfamilies it became evident that it did not belong to any of them. The most significant character is the presence of the "theca" on the fourth sternite, whereas in modern species it is on the fifth sternite. This is a projection of the sternite of the female that functions as a clasping organ on the male during copulation.

Hennig believed that the original conopid fly had the theca on the fourth sternite, that this receded, and then the projection developed on the fifth sternite. Because of the primitive characters listed below, I believe that *Palaeomyopa* originated from the precursor of the Conopidae, and developed as a separate branch that later became extinct. Perhaps some day a conopid may be found with the theca on the fourth sternite.

The primitive (plesiomorphic) characters that are present in the fossil species are as follows:

1. Abdominal segments of the female of equal length (Fig. 1).
2. First posterior cell (R_5) widely open, but somewhat narrowed (Fig. 2).
3. Very short fleshy mouth parts (Fig. 4).
4. Absence of facial grooves (Fig. 3).

The specialized (apomorphic) characters, compared to current species, are as follows:

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1. Theca on fourth sternite (Fig. 1).
2. Angled anal cell (Fig. 2).
3. Very long second segment of an antenna with an arista (Fig. 3).
4. Peculiar arista (Fig. 3).

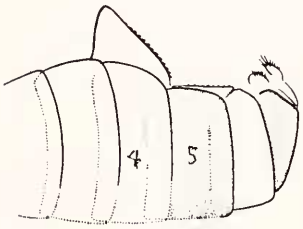

Fig. 1.

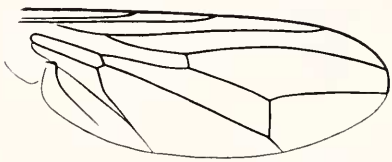

Fig. 2

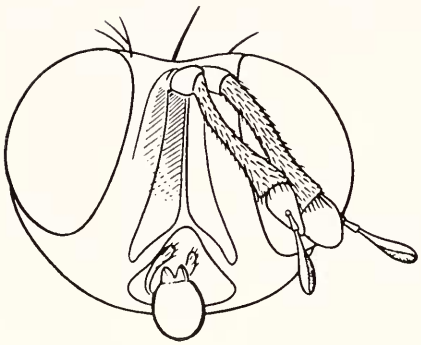

Fig. 3.

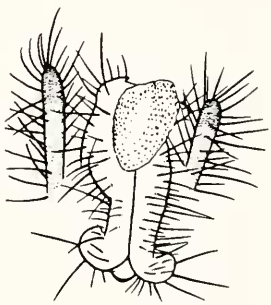

Fig. 4.

Figs. 1-4 *Palaeomyopa tertiaria* Meunier: 1, Abdomen. 2, Wing. 3, Head. 4, Mouth parts (all from Hennig, 1966).

On the basis of the above characters a separate subfamily is justified, which may be called:

Palaeomyopinae, SUBFAMILIA NOVA

Type genus: *Palaeomyopa* Meunier (1899).

Meunier designated only the generic name *Palaeomyopa* in 1899 and added the specific name *tertiaria* in his 1912 paper. He apparently did not have the type of *Palaeomyopa tertiaria* at hand when he described *Palaeosicus loewi* in 1916.

Palaeomyopa tertiaria has been known from four specimens, all from Tertiary Baltic amber. The type was from the University of Königsberg and could not be found by Hennig. Hennig studied the type of *Paleosicus loewi,* also from the Königsberg Collection, and the two British Museum specimens. The theca is visible only on the type of *Palaeosicus loewi.*

The type of *Palaeosicus loewi* was received for study from the Institut und Museum für Geologie und Palaontologie der George-August-Universität, Göttingen, Germany, through the courtesy of Dr. S. Ritzkowski. The British Museum specimen #22206 was sent by N.P. Wyatt and S. Morris. The British Museum specimen #22212 could not be found.

The illustrations are from Hennig's paper and were found to be very accurate. They are reproduced with the kind permission of Dr. Wolfgang Seeger. For a more complete and very scholarly study, Hennig's paper should be consulted.

ACKNOWLEDGMENT

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